Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, D.C. 20554

In the Matter of Preparation for International Telecommunication Union World Radiocommunication Conference	))))	IC Docket No. 94-31

JOINT COMMENTS OF THE ASSOCIATION FOR MAXIMUM SERVICE TELEVISION, INC. AND OTHER MAJOR TELEVISION BROADCASTING ENTITIES

ASSOCIATION FOR MAXIMUM SERVICE TELEVISION, INC.

CAPITAL CITIES/ABC INC.

CBS, INC.

FOX, INC. & FOX TELEVISION STATIONS, INC.

NATIONAL ASSOCIATION OF BROADCASTERS

NATIONAL BROADCASTING COMPANY, INC.

RADIO-TELEVISION NEWS DIRECTORS ASSOCIATION

SOCIETY OF BROADCAST ENGINEERS, INC.

June 15, 1994

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JOINT COMMENTS OF THE ASSOCIATION FOR MAXIMUM SERVICE TELEVISION, INC. AND OTHER MAJOR TELEVISION BROADCASTING ENTITIES

The Association for Maximum Service Television, Inc. ("MSTV"), and Capital Cities/ABC, Inc.; CBS, Inc.; FOX, Inc. & Fox Broadcasting Stations, Inc.; the National Association of Broadcasters; National Broadcasting Company, Inc.; the Radio-Television News Directors Association ("RTNDA") and the Society of Broadcast Engineers, Inc. ("SBE") (the "Joint Commenters") hereby file comments in response to the Notice of Inquiry, IC Docket No. 94-31, released in the above captioned docket on May 5, 1994 (the "Notice").[1/]

[1/] MSTV is a non-profit trade association of local broadcast television stations committed to achieving and maintaining the highest technical quality for the local broadcast system. NAB is a non-profit, incorporated association of radio and television stations and networks which serves and represents the American broadcast industry. RTNDA is a non-profit trade association of local and network news executives, educators, students and others devoted exclusively to electronic journalism. SBE is a national assocation of broadcast engineers and technical communication professionals that support a volunteer group of over 100 broadcast auxiliary frequency coordinators. The other Joint Commenters include major television broadcasting networks. MSTV, NAB, RTNDA, SBE and the other Joint Commenters have a longstanding and vital interest in maintaining the viability of free, universal, over-the-air television broadcasting, and are deeply concerned about the need for continued uninterrupted access to sufficient auxiliary broadcast spectrum.

INTRODUCTION AND SUMMARY

In the Notice, the Commission seeks comment regarding the agendas for the upcoming ITU WRC-95 and WRC-97 conferences. Notice, at ¶ 1. The Notice specifically requests comments on the desirability of advancing the effective date of the WARC-92 allocation of the 1970-2010 MHz band for mobile satellite services ("MSS") operations from 2005 to 1996. Id. at ¶ 21. The Commission notes that the "patchwork" of MSS allocations both internationally and in ITU member countries may threaten the successful implementation of global MSS operations. Id. at ¶ 26. In light of this problem, the Commission "invites parties to explore all options for satisfying future MSS spectrum allocations." Id. at ¶ 27.

The WARC-92 Final Report and Addendum allocated the 1970-2010 MHz band globally for primary use in MSS earth to space operations.[2/] ITU member states need not implement this allocation "before 1 January 2005." ITU, Addendum and Corrigendum to the Final Acts of the World Administrative Radio Conference, Malaga-Torremolinos, at 17 (1992). However, in the United States, the allocation will "not commence before

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[2/] WARC-92 allocated a number of bands for MSS services. See ITU, Final Acts of the World Administrative Radio Conference (WARC-92) and Addendum and Corrigendum to the Final Acts of the World Administrative Radio Conference, Malaga-Torremolinos (1992); see also Redevelopment of Spectrum, (First Report and Order), 7 FCC Rcd 6886, 6887 & 6887 n.12 (1992) (listing the bands and uses allocated at WARC-92 to MSS).

1 January 1996." Id. Of course, in the United States the 1990-2110 MHz band is currently allocated for auxiliary broadcast operations and certain cable operations.

MSTV and the Joint Commenters urge caution in considering the alteration of the implementation date of the ITU's allocation of the 1970-2010 MHz band to mobile satellite services from the current effective date of January 1, 2005. A substantial portion of the international MSS band, the 1990-2010 MHz band, is presently part of a domestic allocation to auxiliary broadcast and cable television use. Moreover, the Commission has recently allocated the 1970-1990 MHz band to personal communications services.[3/] Thus, implementing the 1970-2010 MHz WARC-92 allocation for MSS domestically may be a difficult, if not impossible, task. In consequence, the United States should consider whether the MSS allocation in the 1970-2010 MHz band should be reconsidered. See Notice, ¶ 27 (suggesting that WARC-92 MSS allocations may need to be reconsidered at WRC-95).

I. Auxiliary Broadcast Spectrum is Critical to the Public's Service from Local Broadcast Stations, and Is Already Overburdened.

The Commission has presently allocated television broadcasters three primary spectrum bands, 1990-2110 MHz,

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[3/] See Amendment of the Commission's Rules to Establish New Personal Communications Services, (Memorandum Opinion and Order), Gen. Docket No. 90-314 (adopted June 9, 1994, released June 13, 1994); "FCC Adopts Modification to PCS Band Plan," Report No. DC-2613, 1994 FCC Lexis 2592 (June 9, 1994).

6875-7125 MHz, and 12.70-13.25 MHz, for "auxiliary" operations, including electronic news gathering ("ENG"), intercity relays ("ICRs"), and studio-to-transmitter links ("STLs").[4/] These "auxiliary" operations, in particular mobile newsgathering in the 1990-2110 MHz band, are indispensable components of daily television station operations. Moreover, of the three bands, the 2 GHz band is burdened with the heaviest usage, principally because of the band's favorable propagation characteristics for mobile operations and long haul transmissions.

Increased reliance on broadcast auxiliary operations (and on ENG in particular) to enhance the public's service has resulted in intense congestion, especially in major metropolitan areas.[5/] Further crowding will undoubtedly lead

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[4/] These bands are shared on a primary basis with broadcast network mobile operations, cable system operators, and network auxiliary operations. See 47 C.F.R. §§ 2.106, 74.602(a) (1993); see also Amendment of the Commission's Rules to Establish New Personal Communications Services, (NOI), 5 FCC Rcd 3995, 3997 (1990) (noting that 1990-2110 MHz band is "allocated to auxiliary broadcast and cable use"); cf. Notice, at ¶¶ 21-27 (failing to acknowledge inconsistent domestic allocations for the 1970-2010 MHz band).

[5/] See R. Matheson & K. Steele, A Preliminary Look at Spectrum Requirements for the Fixed Services 40-41 (May 1993); E. Cohen, Television Auxiliary Frequencies Usage Surveys 6-7 (1989) (attached to the NAB's Comments in Gen. Docket No. 90-314 (Oct. 1, 1990)); Reply Comments of MSTV, ET Docket 93-198, at 3-4 (July 29, 1993); Reply Comments of MSTV, Gen. Docket No. 89-554, at 3-4 (Jan. 8, 1991); Comments of Capital Cities/ABC, Engineering Statement of Kenneth Brown, Gen. Docket No. 90-314 (Oct. 1, 1990); see also Comments of NAB, Gen. Docket No. 90-314 (Oct. 1, 1990); Comments of Capital Cities/ABC, Inc., Gen. Docket No. 90-314 (Oct. 1, 1990);

(continued...)

to serious service disruption and stymie further service improvements in the future, particularly with respect to ENG operations.

News -- national and local -- is an important component of broadcast television's service to the public; the ability of local broadcasters to cover live stories "at the scene" provides a valuable community service in times of crisis, and significantly enhances the local nature of broadcast television. The same is true for network news, which has become a great leveler of geographic distance between local audiences and fast-breaking news events nationally and internationally. However, the ability of local and network news providers to render live or remote coverage of events is inextricably related to the availability of adequate spectrum to support auxiliary and ENG operations, and the 2 GHz spectrum shortage for auxiliary operations is very real.

A 1992 OET spectrum study determined that spectrum crowding, particularly in major markets, precluded spectrum sharing in the 1990-2110 MHz band with PCS services. See "Creating New Technology Bands for Emerging Telecommunications Technology," FCC/OET TS92-1 (January 1992) (the "OET Study"); Redevelopment of Spectrum to Encourage Innovation in the Use

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[5/](...continued)
Comments of Cox Broadcasting and Multimedia, Inc., Gen. Docket No. 90-314 (Oct. 1, 1990); Comments of H & C Communications, Inc., Gen. Docket No. 90-314 (Oct. 1, 1990).

of New Telecommunications Technologies, (NPRM), 7 FCC Rcd 1542, 1544 (1992) (the "NPRM"). Based on the OET Study, the Commission concluded that "it [was] not practicable . . . to relocate the broadcast auxiliary" service. NPRM, 7 FCC Rcd at 1544.

More recently still, the Institute for Telecommunications Sciences at NTIA conducted a study that: (1) found that the 1990-2110 MHz band is "already crowded in many major markets"; (2) documented a 14.6% annual rate of growth in broadcasters' use of the band from 1989-93; and (3) projected a 15% annual growth rate in use for the next five years. Id. See R. Matheson & K. Steele, A Preliminary Look at Spectrum Requirements for the Fixed Services 40-41 (May 1993) (the "ITS Study").

These studies provide telling evidence of a spectrum shortage for auxiliary broadcast operations.[6/] However, the lack of sufficient auxiliary spectrum is also demonstrated on a recurring basis in larger markets whenever major news events occur. The auxiliary spectrum needs of broadcasters routinely exceed the available channel capacity whenever special events, such as the World Cup, create additional demands on the

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[6/] Indeed, multiple studies have demonstrated, time and again, that broadcast auxiliary spectrum is overcrowded. An industry study conducted five years ago found that broadcasters would need significantly more ENG capacity in the immediate future. E. Cohen, Television Auxiliary Frequencies Usage Surveys 4 (June 23, 1989) (the "Cohen Study"). Over 80% of the participants in the study reported congestion problems in their area. Id. at 6.

broadcast auxiliary spectrum. The result is electronic gridlock. See McConnell, "FCC Referees World Cup Broadcast Concerns," Broadcasting Magazine, at 54 (June 6, 1994).

Repeatedly, the Commission has had to step in with emergency ad hoc spectrum allocations to avoid spectrum chaos. However, even in instances where the Commission has provided temporary relief from overcrowding, some broadcasters still have not enjoyed access to adequate spectrum. Id.; see also ITS Study, at 41-42; Cohen Study, at 6-7.[7/]

ATV/NTSC dual mode broadcasting unquestionably will create additional need for broadcast auxiliary spectrum. There is good reason to believe that the crowding which already exists in the 1990-2110 MHz band will significantly increase with the advent of ATV.[8/] "The prospect of needing additional auxiliary broadcast signals to support HDTV is a potentially serious problem, particularly if HDTV signals are transmitted before they are digitally compressed." ITS Study, at 41; see NPRM, 7 FCC Rcd at 1544. The spectrum required to

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[7/] The Commission must bear in mind that ENG operations entail the use of mobile -- not fixed -- links. Thus, it is not technically feasible to relocate ENG operations to higher bands, as has recently been proposed for certain fixed point-to-point microwave services in the 1850-1990, 2120-2150, and 2180-2200 MHz bands. See Redevelopment of Spectrum to Encourage Innovation in the Use of New Telecommunications Technologies, (Second Report and Order), 8 FCC Rcd 6495, 6496-99 (1993).

[8/] See ITS Study, at 41; NPRM, 7 FCC Rcd at 1544; Reply Comments of MSTV, ET Docket No. 93-198, at 4 & 4 n.5 (July 29, 1993).

facilitate dual ATV/NTSC broadcast operations will rapidly exceed the capacity of already overburdened broadcast auxiliary spectrum.[9/]

In sum, the existing allocation of spectrum for auxiliary broadcast operations is barely capable of absorbing existing NTSC demands in larger markets, and is clearly insufficient to meet the anticipated ATV needs of television broadcasters.[10/] And, given the mobile nature of ENG operations, sharing spectrum with other users, particularly fixed users, on a co-primary or secondary basis is not a viable means of resolving the problem.

II. Implementation of the WARC-92 Allocation of the 1970-2010 MHz Band for MSS Operations Should Be Delayed Until Domestic Allocation Issues in the United States Have Been Resolved.

MSTV and the Joint Commenters do not oppose the allocation of spectrum to MSS as a general matter. However,

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[9/] In addition to the need for increased spectrum due to dual mode ENG operations, dual mode ATV and NTSC operations will likely require some stations to use separate equipment and transmitter feeds, thus significantly increasing the use of auxiliary broadcast spectrum. See ITS Study, at 4; see generally Advanced Television Systems, (Third Report and Order), 7 FCC Rcd 6924, 6970-80 (1992).

[10/] Indeed, almost a decade ago, the Commission noted that crowding caused by increased ENG operations was forcing broadcasters to migrate into the 2450-2500 MHz band, even at the cost of new equipment. "[B]ecause of the increased use of these lower channels for ENG, which has resulted in increasing incidences of interference, a number of broadcasters are beginning to acquire equipment that permits use of the upper three channels, i.e., 2450-2500 MHz." Allocating Spectrum for, and Establishing Other Rules and Policies Pertaining to, a Radiodetermination Satellite Services, 50 Fed. Reg. 39101, 39104 (1985) ("Radiodetermination Services").

we strongly believe that before the United States delegation supports advancing the effective date of the WARC-92 spectrum allocations for MSS, it should resolve the issues inherent in implementation of such allocations domestically.[11/]

In consequence, MSTV and the Joint Commenters strongly urge that the global implementation of the WARC-92 1970-2010 MHz band allocation not be accelerated from 2005 to 1996. See Notice, at ¶ 21. As mentioned above, the FCC's recent allocation of the 1970-1990 MHz band for PCS raises serious questions regarding the viability of the WARC-92 allocation domestically.[12/] In fact, the Commission has indicated its intent to initiate a proceeding to investigate additional allocation possibilities in the near future, with the purpose of accommodating MSS operations within the remaining internationally designated bands, while at the same time maintaining sufficient spectrum for broadcast auxiliary use.[13/] Accelerating the effective date of the 1970-2010 MHz

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[11/] It is not likely that spectrum sharing between broadcast auxiliary operations and MSS is feasible. See Redevelopment of Spectrum, (First Report and Order), 7 FCC Rcd 6886, 6888 n.15 (1992) ("AMSC also contends that for MSS, sharing with other services is not likely to be feasible.").

[12/] See Amendment of the Commission's Rules to Establish New Personal Communications Services, (Memorandum Opinion and Order), Gen. Docket No. 90-314 (adopted June 9, 1994, released June 13, 1994); see also "FCC Adopts Modification to PCS Band Plan," Report No. DC-2613, 1994 FCC Lexis 2592 (June 9, 1994).

[13/] Amendment of the Commission's Rules to Establish New Personal Communications Services, (Memorandum Order and Opinion, Gen. Docket No. 90-314, at ¶ 97 (adopted June 9, 1994, released June 13, 1994).

allocation from 2005 can serve no useful purpose given the uncertainty that exists in the United States regarding the availability of the band for MSS and the need for careful consideration of the current and future requirements for auxiliary broadcast spectrum to support free, universal, over-the-air broadcast television.

The Joint Commenters urge the United States to advocate caution at WRC-95 regarding the implementation schedule for the WARC-92 allocation of the 1970-2010 MHz band for MSS. Moreover, the United States should not oppose efforts to identify an alternative international spectrum allocation for MSS in another band. The Joint Commenters are cautiously optimistic that the 2390-2420 MHz band might provide an appropriate alternative to the 1970-2010 MHz band for MSS. See Notice, ¶ 27. The availability of this band in the United States should be resolved before the United States commits internationally to an expedited implementation schedule for the WARC-92 1970-2010 MHz band allocation.

CONCLUSION

Broadcast auxiliary spectrum is overburdened, and there is no cause for optimism that this problem will simply go away. On the contrary, multiple studies conducted over the past six years have consistently found that the resolution of the crowding problem will require affirmative Commission action. The Commission should promote the continuity of high quality, universally available, and locally-based broadcast

television service. It can materially further this objective by not accelerating implementation of the WARC-92 1970-2010 MHz band allocation for MSS. Until more is known about the technical considerations for spectrum sharing between broadcast auxiliary operations and MSS earth to space links, this allocation should not be implemented globally.

Respectfully submitted,

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